ICF CONSULTING

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MEMORANDUM

TO: Chris Lichens, Remedial Project Manager
Site Cleanup Section 4, SFD-7-4

THROUGH: Rose Fong, ESAT Task Order Project Officer (TOPO) RF
Quality Assurance (QA) Program, MTS-3

FROM: Doug Lindelof, Data Review Task Manager Waiver for DL
Region 9 Environmental Services Assistance Team (ESAT)

ESAT Contract No.: 68-W-01-028
Technical Direction Form No.: 00905082 Amendment 2

DATE: June 23, 2006

SUBJECT: Review of Analytical Data, Tier 3

Attached are comments resulting from ESAT Region 9 review of the following analytical data:

Site:	Omega Chem OU2
Site Account No.:	09 BC LA02
CERCLIS ID NO.:	CAD042245001
Case No.:	34569
SDG No.:	Y2312
Laboratory:	A4 Scientific, Inc. (A4)
Analysis:	Volatiles
Samples:	4 Groundwater Samples (see Case Summary)
Collection Date:	September 2, 2005
Reviewer:	Calvin Tanaka, ESAT/Laboratory Data Consultants

This report has been reviewed by the EPA TOPO for the ESAT contract, whose signature appears above.

If there are any questions, please contact Rose Fong (QA Program/EPA) at (415) 972-3812.

Attachment

cc: Ray Flores, CLP PO USEPA Region 6
Steve Remaley, CLP PO USEPA Region 9

CLP PO: [X] Attention [ ] Action

SAMPLING ISSUES: [X] Yes [ ] No

Data Validation Report

Case No.: 34569
SDG No.: Y2312
Site: Omega Chem OU2
Laboratory: A4 Scientific, Inc. (A4)
Reviewer: Calvin Tanaka, ESAT/LDC
Date: June 23, 2006

I. CASE SUMMARY

Sample Information

Samples:	Y2312, Y2315, Y2316, and Y2317
Concentration and Matrix:	Low Concentration Water
Analysis:	Volatiles
SOW:	OLC03.2
Collection Date:	September 2, 2005
Sample Receipt Date:	September 3, 2005
Extraction Date:	Not Applicable
Analysis Date:	September 7 and 8, 2005

Field QC

Field Blanks (FB):	Y2317
Equipment Blanks (EB):	Not Provided
Trip Blank (TB):	Not Provided
Background Samples (BG):	Not Provided
Field Duplicates (D1):	Y2315 and Y2316

Laboratory QC

Method Blanks & Associated Samples:

VBLK82:	Y2312, Y2312DL, Y2315, Y2316, Y2317, Y2317MS, and Y2317MSD
VBLK83:	Storage blank VHBLK01

Tables

1A:	Analytical Results with Qualifications
1B:	Data Qualifier Definitions for Organic Data Review
2:	Calibration Summary

CLP PO Action

None.

CLP PO Attention

1. Detected results for some analytes are qualified as nondetected and estimated (U,J) due to method blank, storage blank, and field blank contamination (see Comment B).

2. Results for methylene chloride in all samples are qualified as estimated (J) due to a calibration problem (see Comment C).

3. Results for some analytes in samples Y2312 and Y2315 are qualified as estimated (J) due to deuterated monitoring compound (DMC) recovery problems (see Comment D).

Sampling Issues

1. Detected results for acetone and benzene are qualified as nondetected and estimated (U,J) due to field blank contamination (see Comment B).

2. No sample was designated for "laboratory QC" on the traffic report & chain of custody record (TR/COC). The laboratory performed matrix spike/matrix spike duplicate (MS/MSD) analysis on Y2317. However, Y2317 is a field blank; consequently, spike recovery and relative percent difference data are not meaningful.

Additional Comments

The DMC trans-1,3-dichloropropene-d4 had RRFs below the 0.05 validation criterion in the initial and continuing calibrations (see Table 2). Quantitation of the analytes associated with this DMC may have been affected by the low RRFs (see attached Table 9 from the Functional Guidelines).

Other than a laboratory artifact (approximate retention time of 8.2 minutes), tentatively identified compounds (TICs) were found in sample Y2312 (see attached Form 1LCF).

The laboratory performed manual integrations on samples due to incorrect auto integration. Manual integrations were reviewed and found to be satisfactory and in compliance with proper integration techniques.

This report was prepared in accordance with the following documents:

- ESAT Region 9 Standard Operating Procedure 901, *Guidelines for Data Review of Contract Laboratory Program Analytical Services (CLPAS) Volatile and Semivolatile Data Packages*;

- *USEPA Contract Laboratory Program Statement of Work for Analysis of Low Concentration Organic,* OLC03.2, December 2000; and

- USEPA Contract Laboratory Program National Functional Guidelines for Low Concentration Organic Data Review, June 2001.

II. VALIDATION SUMMARY

The data were evaluated based on the following parameters:

	Parameter	Acceptable	Comment
1.	Holding Time/Preservation	Yes	
2.	GC/MS Tune/GC Performance	Yes	
3.	Initial Calibration	No	C
4.	Continuing Calibration	Yes	
5.	Laboratory Blanks	No	B
6.	Field Blanks	No	B
7.	Deuterated Monitoring Compounds	No	D
8.	Matrix Spike/Matrix Spike Duplicates	N/A	
9.	Laboratory Control Samples/Duplicates	N/A	
10.	Internal Standards	Yes	
11.	Compound Identification	Yes	
12.	Compound Quantitation	Yes	A, E
13.	System Performance	Yes	
14.	Field Duplicate Sample Analysis	Yes	

N/A = Not Applicable

III. VALIDITY AND COMMENTS

A. The following results, denoted with an "L" qualifier, are estimated and flagged "J" in Table 1A.

- All detected results below the contract required quantitation limits

Results below the contract required quantitation limits (CRQLs) are considered to be qualitatively acceptable, but quantitatively unreliable, due to the uncertainty in analytical precision near the limit of detection.

B. The following results are qualified as nondetected and estimated due to method blank, storage blank, and field blank contamination and are flagged "U,J" in Table 1A.

- Acetone in samples Y2315 and Y2316
- Methylene chloride in samples Y2312, Y2315, and Y2317
- Benzene in sample Y2312

Acetone was found in method blank VBLK83 and field blank Y2317, methylene chloride was found in storage blank VHBLK01, and benzene was found in field blank Y2317 (see Table 1A for concentrations). Results for the samples listed above are considered nondetected and estimated (U,J) and quantitation limits have been raised according to blank qualification rules presented below.

No positive results are reported unless the concentration of the compound in the sample exceeds 10 times the amount in any associated blank for common laboratory contaminants or 5 times the amount for other compounds. If the sample result is greater than the CRQL, the quantitation limit is raised to the sample result and reported as nondetected. If the sample result is less than the CRQL, the result is reported as nondetected at the CRQL.

The acetone result for sample Y2312 (29 μg/L) is not qualified as nondetected and estimated since the concentration exceeds 10 times the amount in field blank Y2317 (1.7 μg/L). The chloroform result for sample Y2312 (86 μg/L) is not qualified as nondetected and estimated since the concentration exceeds 5 times the amount in storage blank VHBLK01 (0.21 μg/L).

A storage blank is laboratory reagent water stored in a vial in the same area as the field samples. The storage blank is used to determine the level of contamination introduced by the laboratory during sample storage prior to analysis.

A laboratory method blank is laboratory reagent water or baked sand analyzed with all reagents, deuterated monitoring compounds, and internal standards and carried through the same sample preparation and analytical procedures as the field samples. The laboratory method blank is used to determine the level of contamination introduced by the laboratory during analysis.

A field blank is clean water prepared as a sample in the field by the sampler and shipped to the laboratory with the samples. A field blank is intended to detect contaminants that may have been introduced in the field, although any laboratory introduced contamination will be present. Contaminants that are found in the field blank which are absent in the laboratory method blank could be indicative of a field QC problem, a deficiency in the bottle preparation procedure, a difference in preparation of the laboratory and field blanks, or other indeterminate error.

C. Results for the following analyte are qualified as estimated due to a large percent relative standard deviation (%RSD) in the initial calibration and are flagged "J" in Table 1A.

- Methylene chloride in all samples, all method blanks, and storage blank VHBLK01

The %RSD exceeded the ≤30.0% validation criterion for methylene chloride in the initial calibration (see Table 2).

The DMC trans-1,3-dichloropropene-d4 also had a %RSD that exceeded the ≤30.0% validation criterion in the initial calibration (see Table 2). Quantitation of the analytes associated with this DMC may have been affected by the high %RSD (see attached Table 9 from the Functional Guidelines).

The initial calibration demonstrates that the instrument is capable of acceptable performance in the beginning of the analytical run and of producing a linear calibration curve.

D. Results for the following analytes are qualified as estimated due to DMC recoveries outside QC limits and are flagged "J" in Table 1A.

{Chloroform-d}
- 1,1-Dichloroethane and chloroform in sample Y2312

{trans-1,3-Dichloropropene-d4}
- cis-1,3-Dichloropropene, trans-1,3-dichloropropene, and 1,1,2-trichloroethane in sample Y2315

The DMC recoveries outside QC limits are shown below.

Sample	DMC	% Recovery	QC Limits
Y2312	Chloroethane-d5	210	60-126
Y2312	Chloroform-d	170	80-123
Y2315	trans-1,3-Dichloropropene-d4	78	80-128
Y2317MSD	1,1,2,2-Tetrachloroethane-d2	71	75-131

Detected results for affected analytes where DMC recoveries fell below QC limits may be biased low; where results are nondetected, false negatives may exist. Detected results for affected analytes where DMC recoveries exceeded QC limits may be biased high. For DMC recoveries that exceeded QC limits, only detected results for associated analytes are qualified. The DMC chloroethane-d5 recovery for sample Y2312 exceeded the QC limit but results were not qualified because they were nondetects. The samples were not reanalyzed.

Surrogates (e.g., deuterated monitoring compounds (DMCs)) are organic compounds which are similar to the target analytes in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples. All samples are spiked with DMCs prior to purging. DMCs provide information about both the laboratory performance on individual samples and the possible effects of the sample matrix on the analytical results.

E. Sample Y2312 was reanalyzed at a 50-fold dilution due to high levels of trichlorofluoromethane, 1,1-dichloroethene, 1,1,2-trichloro-1,2,2-trifluoroethane, chloroform, trichloroethene, and tetrachloroethene that exceeded the calibration range. Results for these analytes are reported from the diluted analysis in Table 1A; results for other analytes are reported from the undiluted analysis.

ANALYTICAL RESULTS
Table 1A

Case No. : 34569 SDG No. : Y2312
Site : OMEGA CHEM OU2
Lab : A4 SCIENTIFIC, INC.
Reviewer : Calvin Tanaka, ESAT/LDC
Date : June 23, 2006

QUALIFIED DATA
Concentration in ug/L

Analysis Type : Low Level Water Samples
For Volatiles

Station Location :	17			20		D1	21		D1	22		FB	Method Blank			Method Blank			Storage Blank		
Sample ID :	Y2312			Y2315			Y2316			Y2317			VBLK82			VBLK83			VHBLK01		
Collection Date :	9/2/2005			9/2/2005			9/2/2005			9/2/2005											
Dilution Factor :	1.0			1.0			1.0			1.0			1.0			1.0			1.0		
Volatile Compound	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**
Dichlorodifluoromethane	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
Chloromethane	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U			0.17L	J	A
Vinyl Chloride	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
Bromomethane	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
Chloroethane	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
Trichlorofluoromethane	140		E	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
1,1-Dichloroethene	400		E	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
1,1,2-Trichloro-1,2,2-trifluoroethane	350		E	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
Acetone	29			5.0U	J	B	5.0U	J	B	1.7L	J	A	5.0U			0.34L	J	A	5.0U		
Carbon Disulfide	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
Methyl Acetate	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
Methylene Chloride	0.53U	J	BC	0.50U	J	BC	0.50U	J	C	2.2U	J	BC	0.50U	J	C	0.50U	J	C	0.49L	J	AC
trans-1,2-Dichloroethene	1.4			0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
Methyl tert-Butyl Ether	2.1			1.6			1.9			0.50U			0.50U			0.50U			0.50U		
1,1-Dichloroethane	2.2	J	D	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
cis-1,2-Dichloroethene	2.0			0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
2-Butanone	5.0U			5.0U			5.0U			5.0U			5.0U			5.0U			5.0U		
Bromochloromethane	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
Chloroform	86	J	DE	0.50U			0.50U			0.50U			0.50U			0.50U			0.21L	J	A
1,1,1-Trichloroethane	0.53			0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
Cyclohexane	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
Carbon Tetrachloride	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
Benzene	0.50U	J	B	0.50U			0.50U			0.18L	J	A	0.50U			0.50U			0.50U		
1,2-Dichloroethane	9.9			0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
Trichloroethene	80		E	1.4			1.4			0.50U			0.50U			0.50U			0.50U		
Methylcyclohexane	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
1,2-Dichloropropane	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
Bromodichloromethane	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
cis-1,3-Dichloropropene	0.50U			0.50U	J	D	0.50U			0.50U			0.50U			0.50U			0.50U		
4-Methyl-2-pentanone	5.0U			5.0U			5.0U			5.0U			5.0U			5.0U			5.0U		
Toluene	0.50U			0.50U			0.50U			0.75			0.50U			0.50U			0.50U		
trans-1,3-Dichloropropene	0.50U			0.50U	J	D	0.50U			0.50U			0.50U			0.50U			0.50U		
1,1,2-Trichloroethane	0.50U			0.50U	J	D	0.50U			0.50U			0.50U			0.50U			0.50U		
Tetrachloroethene	500		E	9.4			8.8			0.50U			0.50U			0.50U			0.50U		
2-Hexanone	5.0U			5.0U			5.0U			5.0U			5.0U			5.0U			5.0U		
Dibromochloromethane	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
1,2-Dibromoethane	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		

ANALYTICAL RESULTS
Table 1A

Case No. : 34569 SDG No. : Y2312
Site : OMEGA CHEM OU2
Lab : A4 SCIENTIFIC, INC.
Reviewer : Calvin Tanaka, ESAT/LDC
Date : June 23, 2006

QUALIFIED DATA
Concentration in ug/L

Analysis Type : Low Level Water Samples
For Volatiles

Station Location :	17			20		D1	21		D1	22		FB	Method Blank			Method Blank			Storage Blank		
Sample ID :	Y2312			Y2315			Y2316			Y2317			VBLK82			VBLK83			VHBLK01		
Collection Date :	9/2/2005			9/2/2005			9/2/2005			9/2/2005											
Dilution Factor :	1.0			1.0			1.0			1.0			1.0			1.0			1.0		
Volatile Compound	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**
Chlorobenzene	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
Ethylbenzene	0.50U			0.50U			0.50U			0.11L	J	A	0.50U			0.50U			0.50U		
Xylenes (total)	0.50U			0.50U			0.50U			0.48L	J	A	0.50U			0.50U			0.50U		
Styrene	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
Bromoform	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
Isopropylbenzene	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
1,1,2,2-Tetrachloroethane	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
1,3-Dichlorobenzene	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
1,4-Dichlorobenzene	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
1,2-Dichlorobenzene	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
1,2-Dibromo-3-chloropropane	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
1,2,4-Trichlorobenzene	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
1,2,3-Trichlorobenzene	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		

Val - Validity. Refer to Data Qualifiers in Table 1B.
Com - Comments. Refer to the Corresponding Section in the Narrative for each letter.
CRQL - Contract Required Quantitation Limit, N/A - Not Applicable, NA - Not Analyzed

D1, D2, etc. - Field Duplicate Pairs
FB - Field Blank, EB - Equipment Blank, TB - Trip Blank, BG - Background Sample

ANALYTICAL RESULTS
Table 1A

Case No. : 34569 SDG No. : Y2312
Site : OMEGA CHEM OU2
Lab : A4 SCIENTIFIC, INC.
Reviewer : Calvin Tanaka, ESAT/LDC
Date : June 23, 2006

QUALIFIED DATA
Concentration in ug/L

Analysis Type : Low Level Water Samples
For Volatiles

Station Location :																					
Sample ID :	CRQL																				
Collection Date :																					
Dilution Factor :																					
Volatile Compound	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com
Dichlorodifluoromethane	0.50																				
Chloromethane	0.50																				
Vinyl Chloride	0.50																				
Bromomethane	0.50																				
Chloroethane	0.50																				
Trichlorofluoromethane	0.50																				
1,1-Dichloroethene	0.50																				
1,1,2-Trichloro-1,2,2-trifluoroethane	0.50																				
Acetone	5.0																				
Carbon Disulfide	0.50																				
Methyl Acetate	0.50																				
Methylene Chloride	0.50																				
trans-1,2-Dichloroethene	0.50																				
Methyl-tert-Butyl Ether	0.50																				
1,1-Dichloroethane	0.50																				
cis-1,2-Dichloroethene	0.50																				
2-Butanone	5.0																				
Bromochloromethane	0.50																				
Chloroform	0.50																				
1,1,1-Trichloroethane	0.50																				
Cyclohexane	0.50																				
Carbon Tetrachloride	0.50																				
Benzene	0.50																				
1,2-Dichloroethane	0.50																				
Trichloroethene	0.50																				
Methylcyclohexane	0.50																				
1,2-Dichloropropane	0.50																				
Bromodichloromethane	0.50																				
cis-1,3-Dichloropropene	0.50																				
4-Methyl-2-pentanone	5.0																				
Toluene	0.50																				
trans-1,3-Dichloropropene	0.50																				
1,1,2-Trichloroethane	0.50																				
Tetrachloroethene	0.50																				
2-Hexanone	5.0																				
Dibromochloromethane	0.50																				
1,2-Dibromoethane	0.50																				

ANALYTICAL RESULTS
Table 1A

Case No. : 34569 SDG No. : Y2312
Site : OMEGA CHEM OU2
Lab : A4 SCIENTIFIC, INC.
Reviewer : Calvin Tanaka, ESAT/LDC
Date : June 23, 2006

QUALIFIED DATA
Concentration in ug/L

Analysis Type : Low Level Water Samples
For Volatiles

Station Location :																				
Sample ID :	CRQL																			
Collection Date :																				
Dilution Factor :																				
Volatile Compound		**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**
Chlorobenzene	0.50																			
Ethylbenzene	0.50																			
Xylenes (total)	0.50																			
Styrene	0.50																			
Bromoform	0.50																			
Isopropylbenzene	0.50																			
1,1,2,2-Tetrachloroethane	0.50																			
1,3-Dichlorobenzene	0.50																			
1,4-Dichlorobenzene	0.50																			
1,2-Dichlorobenzene	0.50																			
1,2-Dibromo-3-chloropropane	0.50																			
1,2,4-Trichlorobenzene	0.50																			
1,2,3-Trichlorobenzene	0.50																			

Val - Validity. Refer to Data Qualifiers in Table 1B.
Com - Comments. Refer to the Corresponding Section in the Narrative for each letter.
CRQL - Contract Required Quantitation LImit, N/A - Not Applicable, NA - Not Analyzed

D1, D2, etc. - Field Duplicate Pairs
FB - Field Blank, EB - Equipment Blank, TB - Trip Blank, BG - Background Sample

TABLE 1B

DATA QUALIFIER DEFINITIONS FOR ORGANIC DATA REVIEW

The definitions of the following qualifiers are prepared according to the document, "USEPA Contract Laboratory Program National Functional Guidelines for Low Concentration Organic Data Review," June 2001.

U	The analyte was analyzed for, but was not detected above the level of the adjusted Contract Required Quantitation Limit (CRQL) for sample and method.
L	Indicates results which fall below the Contract Required Quantitation Limit. Results are estimated and are considered qualitatively acceptable but quantitatively unreliable due to uncertainties in the analytical precision near the limit of detection.
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.
UJ	The analyte was not detected above the adjusted CRQL. However, the reported adjusted CRQL is approximate and may be inaccurate or imprecise.
R	The sample results are unusable. The analyte may or may not be present in the sample.

Table 2
Calibration Summary

Case No.: 34569
SDG No.: Y2312
Site: Omega Chem OU2
Laboratory: A4 Scientific, Inc. (A4)
Reviewer: Calvin Tanaka, ESAT/LDC
Date: June 23, 2006

RELATIVE RESPONSE FACTORS (RRF)

	RRF	RRF	RRF
Analysis date:	8/29/05	9/7/05	9/8/05
Analysis time:	10:43-	07:50	08:13
GC/MS I.D.:	C-5973	C-5973	C-5973
Analyte	Init.	Cont.	Cont.
trans-1,3-Dichloropropene-d4	0.041	0.047	0.044

PERCENT RELATIVE STANDARD DEVIATIONS (%RSD)

	%RSD
Analysis Date:	8/29/05
Analysis Time:	10:43-
GC/MS I.D.:	C-5973
Analyte	Init.
Methylene chloride	39.3
trans-1,3-Dichloropropene-d4	34.3

ASSOCIATED SAMPLES AND METHOD BLANKS

Initial, 8/29/05:	Y2312, Y2312DL, Y2315, Y2316, Y2317, Y2317MS, and Y2317MSD; method blanks VBLK82 and VBLK83; storage blank VHBLK01
Cont., 9/7/05:	Y2312, Y2312DL, Y2315, Y2316, Y2317, Y2317MS, and Y2317MSD; method blank VBLK82
Cont., 9/8/05:	Method blank VBLK83; storage blank VHBLK01.

Table 9. Volatile Deuterated Monitoring Compounds and the Associated Target Compounds

Chloroethane-d5 (DMC)	1,2-Dichloropropane-d6 (DMC)	1,3-Dichlorobenzene-d4 (DMC)
Dichlorodifluoromethane	Cyclohexane	Chorobenzene
Chloromethane	Methylcyclohexane	1,3-Dichlorobenzene
Bromomethane	1,2-Dichloropropane	1,4-Dichlorobenzene
Chloroethane	Bromodichloromethane	1,2-Dichlorobenzene
Carbon Disulfide		1,2,4-Trichlorobenzene
		1,2,3-Trichlorobenzene

Bromoform-d (DMC)	trans-1,3-Dichloropropene-d4 (DMC)	Chloroform-d (DMC)
Dibromochloromethane	cis-1,3-Dichloropropene	1,1-Dichloroethane
1,2-Dibromoethane	trans-1,3-Dichloropropene	Bromochloromethane
Bromoform	1,1,2-Trichloroethane	Chloroform

2-Butanone-d5 (DMC)	1,1-Dichloroethene-d2 (DMC)	2-Hexanone-d5 (DMC)
Acetone	trans-1,2-Dichloroethene	4-Methyl-2-pentanone
2-Butanone	cis-1,2-Dichloroethene	2-Hexanone

Vinyl Chloride-d3 (DMC)	Benzene-d6 (DMC)	1,1,2,2-Tetrachloroethane-d2 (DMC)
Vinyl Chloride	Benzene	1,1,2,2,-Tetrachlorothane
		1,2-Dibromo-3-chloropropane

1,2-Dichloroethane-d4 (DMC)	Toulene-d8 (DMC)
Trichlorofluoromethane	Trichloroethene
1,1-Dichloroethene	Toluene
1,1,2-Trichloro-1,2,2-trifluoroethane	Tetrachloroethene
Methyl Acetate	Ethylbenzene
Methylene Chloride	Xylenes (total)
Methyl tert-Butyl Ether	Styrene
1,1,1-Trichloroethane	Isopropylbenzene
Carbon Tetrachloride	
1,2-Dichloroethane	

USEPA Contract Laboratory Program National Functional Guidelines for Low Concentration Organic Data Review (EPA-540-R-00-006, June 2001)

1LCF

LOW CONCENTRATION WATER VOLATILE ORGANICS ANALYSIS

DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

Y2312

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W01038

Lab Code: A4 Case No.: 34569 Client No.: SDG No.: Y2312

Lab Sample ID: 6657.002 Date Received: 09/03/2005

Lab File ID: C2179 Date Analyzed: 09/07/2005

Purge Volume: 25 (ML) Dilution Factor: 1.0

GC Column: DB-624 ID: 0.20 (MM) Length: 25 (M)

Number TICs found: 3

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (UG/L)	Q
01		UNKNOWN	2.79	0.93	J
02	000354-23-4	Ethane, 1,2-dichloro-1,1,2-t	3.32	20	JN
03		UNKNOWN	6.97	1.8	J
04					
05					
06					
07					
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